

28 March 2014

Mr. Brian Waggle
Hargis & Associates - Mesa
1640 South Stapley Drive, Suite 209
Mesa, AZ 85204



H&P Project: HA022814-11
Client Project: 1132.41F / Phoenix, AZ

Dear Mr. Brian Waggle:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 25-Feb-14 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,



Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

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Reported:
28-Mar-14 10:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LKS-43-5'	E403003-01	Vapor	24-Feb-14	25-Feb-14
LKS-43-15'	E403003-02	Vapor	24-Feb-14	25-Feb-14
VS-38-5'	E403003-03	Vapor	24-Feb-14	25-Feb-14
LA-06-5'	E403003-04	Vapor	24-Feb-14	25-Feb-14
VS-39-5'	E403003-05	Vapor	25-Feb-14	25-Feb-14
VS-33-15'	E403003-06	Vapor	25-Feb-14	25-Feb-14

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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
LKS-43-5' (E403003-01) Vapor Sampled: 24-Feb-14 Received: 25-Feb-14									
Trichloroethene	ND	5.5	ug/m3	1	EC40307	03-Mar-14	03-Mar-14	EPA TO-15	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91.5 %	77-127		"	"	"	"	
LKS-43-15' (E403003-02) Vapor Sampled: 24-Feb-14 Received: 25-Feb-14									
Trichloroethene	ND	5.5	ug/m3	1	EC40307	03-Mar-14	03-Mar-14	EPA TO-15	
Tetrachloroethene	12	6.9	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		102 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		93.5 %	77-127		"	"	"	"	
VS-38-5' (E403003-03) Vapor Sampled: 24-Feb-14 Received: 25-Feb-14									
Trichloroethene	ND	5.5	ug/m3	1	EC40307	03-Mar-14	03-Mar-14	EPA TO-15	
Tetrachloroethene	7.8	6.9	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.7 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92.5 %	77-127		"	"	"	"	
LA-06-5' (E403003-04) Vapor Sampled: 24-Feb-14 Received: 25-Feb-14									
Trichloroethene	ND	5.5	ug/m3	1	EC40307	03-Mar-14	03-Mar-14	EPA TO-15	
Tetrachloroethene	32	6.9	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.8 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91.9 %	77-127		"	"	"	"	

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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VS-39-5' (E403003-05) Vapor Sampled: 25-Feb-14 Received: 25-Feb-14									
Trichloroethene	ND	5.5	ug/m3	1	EC40307	03-Mar-14	03-Mar-14	EPA TO-15	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92.2 %	77-127		"	"	"	"	
VS-33-15' (E403003-06) Vapor Sampled: 25-Feb-14 Received: 25-Feb-14									
Trichloroethene	ND	5.5	ug/m3	1	EC40307	03-Mar-14	03-Mar-14	EPA TO-15	
Tetrachloroethene	15	6.9	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		93.2 %	77-127		"	"	"	"	

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Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC40307 - TO-15

Blank (EC40307-BLK1)

Prepared & Analyzed: 03-Mar-14

Trichloroethene	ND	5.5	ug/m3
Tetrachloroethene	ND	6.9	"

Surrogate: 1,2-Dichloroethane-d4	204	"	214	95.1	76-134
Surrogate: Toluene-d8	202	"	207	97.4	78-125
Surrogate: 4-Bromofluorobenzene	365	"	364	100	77-127

LCS (EC40307-BS1)

Prepared & Analyzed: 03-Mar-14

Trichloroethene	51	5.5	ug/m3	54.8	93.4	70-130
Tetrachloroethene	69	6.9	"	69.2	99.3	70-130

Surrogate: 1,2-Dichloroethane-d4	208	"	214	96.8	76-134
Surrogate: Toluene-d8	205	"	207	98.9	78-125
Surrogate: 4-Bromofluorobenzene	361	"	364	98.9	77-127

LCS Dup (EC40307-BSD1)

Prepared & Analyzed: 03-Mar-14

Trichloroethene	53	5.5	ug/m3	54.8	96.2	70-130	2.95	25
Tetrachloroethene	70	6.9	"	69.2	101	70-130	1.72	25

Surrogate: 1,2-Dichloroethane-d4	206	"	214	96.3	76-134
Surrogate: Toluene-d8	202	"	207	97.7	78-125
Surrogate: 4-Bromofluorobenzene	358	"	364	98.2	77-127

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Notes and Definitions

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory (Certification # L11-175) in accordance with the DoD-ELAP program. H&P is approved by the State of Arizona under Certification Numbers AZM758 and AZ0779. H&P is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS
Certificate# 2742, 2745, & 2741 approved for LUFT
Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

Hexachlorobutadiene by EPA TO-15 & TO-14A	1,3-Dichlorobenzene by EPA TO-15 & TO-14A
1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A	Trichlorofluoromethane by EPA TO-14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A	Naphthalene by H&P SOP TO-15/GC-MS
Dichlorotetrafluoroethane by EPA TO-14A	1,2-Dibromoethane (EDB) by EPA TO-15 & TO-14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A	1,2-Dibromo-3-chloropropane by EPA TO-15
Benzene by EPA TO-15 & TO-14A	1,3-Butadiene by EPA TO-15
Chlorobenzene by EPA TO-15 & TO-14A	1,1,2-Trichlorotrifluoroethane by EPA TO-14A
Ethyl benzene by EPA TO-15 & TO-14A	Carbon disulfide by EPA TO-15
Styrene by EPA TO-15 & TO-14A	1,4-Dioxane by EPA TO-15
Toluene by EPA TO-15 & TO-14A	
Total Xylenes by EPA TO-15	
1,1,1-Trichloroethane by EPA TO-15 & TO-14A	
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A	
1,1,2-Trichloroethane by EPA TO-15 & TO-14A	
1,1-Dichloroethane by EPA TO-15 & TO-14A	
1,1-Dichloroethene by EPA TO-15 & TO-14A	
1,2-Dichloroethane by EPA TO-15 & TO-14A	
1,2-Dichloropropane by EPA TO-15 & TO-14A	
Benzyl Chloride by EPA TO-15 & TO-14A	
Bromoform by EPA TO-15	
Bromomethane by EPA TO-15 & TO-14A	
Carbon tetrachloride by EPA TO-15 & TO-14A	
Chloroethane by EPA TO-15 & TO-14A	
Chloroform by EPA TO-15 & TO-14A	
Chloromethane by EPA TO-15 & TO-14A	
cis-1,2-Dichloroethene by EPA TO-15 & TO-14A	
cis-1,3-Dichloropropene by EPA TO-15 & TO-14A	
Methylene chloride by EPA TO -15 & TO-14A	
Tetrachloroethane by EPA TO-15 & TO-14A	
trans-1,2-Dichloroethene by EPA TO-15	
trans-1,3-Dichloropropene by EPA TO-15 & TO-14A	
Trichloroethene by EPA TO-15 & TO-14A	
Vinyl chloride by EPA TO -15	
2-Butanone by EPA TO-15	
4-Methyl-2-Pentanone by EPA TO-15	
Hexane by EPA TO-15	
Methyl tert-butyl ether by EPA TO-15	
Vinyl acetate by EPA TO-15	

This certification applies to samples analyzed in summa canisters.

Lab Client and Project Information			
Lab Client/Consultant:	Hargis + Associates	Project Name / #:	1132.41F
Lab Client Project Manager:	Brian Waggle	Project Location:	Phoenix AZ
Lab Client Address:	1640 S. Stapley St	Report E-Mail(s):	lhenken@hargis.com bwaggle@hargis.com bmurphy@hargis.com to hargis@hargis.com
Lab Client City, State, Zip:	Mesa AZ		
Phone Number:			
Reporting Requirements		Turnaround Time	
<input checked="" type="checkbox"/> Standard Report	<input type="checkbox"/> Level III <input type="checkbox"/> Level IV	<input checked="" type="checkbox"/> 5-7 day Std	<input type="checkbox"/> 24-Hr Rush
<input checked="" type="checkbox"/> Excel EDD	<input type="checkbox"/> Other EDD:	<input type="checkbox"/> 3-day Rush	<input checked="" type="checkbox"/> Mobile Lab
<input type="checkbox"/> CA Geotracker Global ID:		<input type="checkbox"/> 48-Hr Rush	<input type="checkbox"/> Other:
Sampler Information		Date: 2/24-2/25	
Sampler(s):		Signature:	

Sample Receipt (Lab Use Only)	
Date Rec'd:	2/24/14
Control #:	140158.002/003
H&P Project #	HA 022814-11
Lab Work Order #	E403003
Sample Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Notes Below
Receipt Gauge ID:	11167
Temp:	20°C
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials:	N

Additional Instructions to Laboratory:																	
<input type="checkbox"/> Check if Project Analyte List is Attached * Preferred VOC units (please choose one): <input type="checkbox"/> µg/L <input checked="" type="checkbox"/> µg/m ³ <input type="checkbox"/> ppbv <input type="checkbox"/> ppmv																	
SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa or Tedlar or Tube	CONTAINER ID (##)	Lab use only: Receipt Vac	VOCs Standard Full List	VOCs Short List / Project List	Oxygenates	Naphthalene	TPH as Gas	TPH as Diesel (sorbent tube)	Aromatic/Aliphatic Fractions	Leak Check Compound	Methane by EPA 8015m	Fixed Gases by ASTM D1945
LKS-43-5'		2/24/14	13:30	Vapor	Summa	472	-1.8										
VS-43-15'			15:16			464	-1.8										
VS-38-5'			16:41			465	-1.9										
LA-06-5'			18:29			261	-1.8										
VS-39-5'		2/25/14	10:03			225	040-1.5										
VS-33-15'			11:52			471	-1.3										

Approved/Relinquished by:	Date:	Time:
Approved/Relinquished by:	Date:	Time:
Approved/Relinquished by:	Date:	Time: